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LISTING OF THE CLAIMS

We Claim:

1. (Currently amended) An implantable stimulation electrode ~~(10)~~ for use with an implantable tissue stimulator, particularly a pacemaker, defibrillator, bone stimulator, or neurostimulator, the stimulation electrode ~~(10)~~ comprising a metallic base body ~~(11)~~, ~~possibly~~ optionally one or more intermediate layers ~~(12)~~ applied to the base body ~~(11)~~, and a coating ~~(17)~~, which covers the base body ~~(11)~~ and ~~possibly~~ optionally the intermediate layers ~~(12)~~, to increase the tissue compatibility,

~~characterized in that~~ wherein the coating ~~(17)~~ comprises a polysaccharide layer made of hyaluronic acid and/or hyaluronic acid derivatives.

2. (Currently amended) The stimulation electrode according to claim 1,

~~characterized in that~~ wherein the hyaluronic acid and hyaluronic acid derivatives have an average molecular weight between 300,000 and 500,000 Dalton after a sterilization.

3. (Currently amended) The stimulation electrode according to claim 2,

~~characterized in that~~ wherein the average molecular weight is between 380,000 and 420,000 Dalton.

4. (Currently amended) The stimulation electrode according to claim 1, ~~one or more of the preceding claims,~~

~~characterized in that~~ wherein the polysaccharide layer has a composition such that the in vivo degradation of the polysaccharide layer is slowed from the outside in the direction of the base body ~~(11)~~ of the stimulation electrode ~~(10)~~.

5. (Currently amended) The stimulation electrode according to claim 4,

~~characterized in that~~ wherein an internal area of the polysaccharide layer is not degradable, at least not completely, within two years.

6. (Currently amended) The stimulation electrode according to claim 5,

~~characterized in that~~ wherein the internal area is 3 to 50 μm~~, particularly 5 to 20 μm~~ thick.

7. (Currently amended) The stimulation electrode according to claim 4,

~~characterized in that~~ wherein an external area of the polysaccharide layer is degradable in vivo within 100 days.

8. (Currently amended) The stimulation electrode according to claim 7,

~~characterized in that~~ wherein the external area is 10 to 250 μm~~, particularly 50 to 150 μm~~ thick.

9. (Currently amended) The stimulation electrode according to claim 4,

~~characterized in that~~ wherein the polysaccharide layer comprises at least two partial layers having different degradation behaviors, the degradation behavior within each partial layer being able to be fixed continuously changeably or constant over the partial layer.

10. (Currently amended) The stimulation electrode according to claim 9,

~~characterized in that~~ wherein the polysaccharide layer comprises an internal partial layer which is degradable by not more than 20 weight-percent in vivo within 2 years.

11. (Currently amended) The stimulation electrode according to claim 10,

~~characterized in that~~ wherein the internal partial layer is 3 to 50 µm~~, particularly 5 to 20 µm~~ thick.

12. (Currently amended) The stimulation electrode according to claim 9,

~~characterized in that~~ wherein the polysaccharide layer comprises an external partial layer which is degradable by at least more than 50 weight-percent within 100 days in vivo.

13. (Currently amended) The stimulation electrode according to claim 12,

~~characterized in that~~ wherein the external partial layer is 10 to 250 µm~~, particularly 50 to 150 µm~~ thick.

14. (Currently amended) The stimulation electrode according to claim 4, ~~one or more of the preceding claims,~~

~~characterized in that~~ wherein a layer thickness of the coating ~~(17)~~ is between 10-400 µm.

15. (Currently amended) The stimulation electrode according to claim 14,

~~characterized in that~~ wherein the layer thickness is 50-120 µm.

16. (Currently amended) The stimulation electrode according to claim 1, ~~one more of the preceding claims,~~

~~characterized in that~~ wherein the coating ~~(17)~~ contains dexamethasone and/or dexamethasone sodium phosphate (DMNP) in a concentration sufficient to ~~unfold~~ produce a pharmacological effect.

17. (Currently amended) The stimulation electrode according to claim 1, ~~one or more of the preceding claims,~~

~~characterized in that~~ wherein the hyaluronic acid or hyaluronic acid derivatives are components of the coating ~~(17)~~ as individual substances, copolymers or block polymers made of hyaluronic acid and hyaluronic acid derivatives, or ~~in the form of~~ mixtures ~~of the above-mentioned individual substances~~ thereof.

18. (Currently amended) The stimulation electrode according to claim 1, ~~one more of the preceding claims,~~

~~characterized in that~~ wherein the polysaccharide layer is immobilized covalently or through physisorption on the surface of the stimulation electrode.

19. (Currently amended) The stimulation electrode according to claim 1, ~~one more of the preceding claims,~~

~~characterized in that~~ wherein the polysaccharide layer comprises an adhesion-promoting layer made of chitosan.

20. (Currently amended) The stimulation electrode according to claim 19,

~~characterized in that~~ wherein the adhesion-promoting layer is 0.1 to 50 µm~~, particularly 1 to 10 µm~~ thick.

21. (Currently amended) The stimulation electrode according to claim 1, ~~one more of the preceding claims,~~

~~characterized in that~~ wherein the polysaccharide layer contains chitosan at least in partial areas or partial layers.

22. The stimulation electrode according to claim 21,

~~characterized in that~~ wherein a component of the chitosan in the total weight of the polysaccharide layer is not more than 50 weight-percent.